Attachment 2

Spec 10598-501

Valve-Ball,8 inch, Pneumatically Actuated: 2 each required as specified

Ref. Device GN-GMV116-S

1 Design:

A. Size: 8" ANSI 16.5 class 1500# RTJ flanged ends, to match sch 160 pipe

B Gaseous Nitrogen -65° F to 120° F

C. Design Pressure: 2600 psi

D. Valve shall be designed, manufactured, and tested in accordance with the ANSI B31.3-2002 Chemical Plant and Petroleum Refinery Piping. ASME B 16.10 Face to Face and End to End Dimensions of Valves

E. Valve leakage: Shall not exceed ANSI/FCI 70-2-1976 Class VI

F. Cv: 1400 Min

Features: bolted construction, double barrier stem seals, vent plugs, which allow the valve body cavities to be completely vented with the valve in the closed position under pressure Trapped or blow-out proof stem, Bi-directional Flow

3. Materials

A. Body = ASTM A351 CF8M Stainless Steel

B. Ball Material = ASTM A182 F6a 410 or 13/8 Stainless Steel

C. Integral Seat Ring Material = ASTM A351 CF8M

D. Upstream Seat = ASTM A182 F316 Stainless Steel w/ QPQ

E. Stem Material = ASTM A182 F316 Stainless Steel

4. Valve Actuator

A. Actuator shall be solenoid valve controlled utilizing 3 phase, 120 VAC, 60 HZ

B. Actuator shall be spring return to normally closed

C. Solenoid shall require no greater than a 30 Amp Service and conform to the NEC 2002.

D. Solenoid shall have dry auxiliary contacts to provide on/off status to customer's PLC and disconnect.

E. Remote on/off control capability, via dry electrical contracts from customer's programmable logic controller, must be provided

F. Actuator shall be designed for 75-150 psig source pressure.

G. Mechanical limit switches shall be provided.

H. Valve must be manually lockable.

I. Actuator must completely open the valve in 2 seconds under full pressure.

5 Valve documentation:

A. Detailed parts list showing components and materials of construction.

B. Drawing of valve showing overall dimensions and connection sizes.

C. Operation instructions detailing how to trouble shoot, test, and maintain the valve.

D. Electrical requirements shall be stated. Warranty terms and conditions shall be provided.

E. Provide Electrical Schematic(s)/drawing(s).

F. All electrical components and wiring must be clearly labeled as identified on electrical schematic(s)/drawing(s)

5. Warranty: Guarantee for a period one year from date of shipment to be free from defective materials and workmanship